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ABSTRACT

This instructor's guide accompanies the self-paced student training modules on plastering, available separately as CE 031 570. Introductory materials include a description of the components of the pre-apprenticeship project, discussion of teacher's role in students' completion of the modules, and scope and contents of Phase 2 training. Each of the 20 modules are briefly summarized according to this format: number of new vocabulary words; goal; performance indicators; overview and suggestions; description of any assignment(s) and/or job sheet(s) and listing of materials, tools, and equipment necessary to complete them; and supplementary references. An annotated bibliography contains references for further study and/or clarification of a topic. (YLB)

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LANE COMMUNITY COLLEGE

# PRE-APPRENTICESHIP

## PHASE 2 TRAINING

## Instructor's Guide

## Plastering

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Office of the President

July 27, 1981

On behalf of Lane Community College, I wish to express our pride and gratitude for the opportunity to participate in the development of the Pre-Apprenticeship training materials. We also wish to commend the Oregon Department of Education for its original concept and continued support; and, the Educational Linkages Component of the CETA Governor's Grant for funding.

The goals of this project are many, but none are more important than that of producing valid, understandable vocational curriculum material. We congratulate the tradespeople and production staff for thier accomplishments.

Finally, I recommend this material to anyone exploreing Pre-Apprenticeship as an entry into the vocational work world, with the hope and belief that it will go a long way toward producing skilled craftspeople who are dedicated to their work.

Sincerely,

Eldon G. Schafer



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## Phase II

### INTRODUCTION

This is the second phase of a designed multi-phase project of pre-apprenticeship study. Phase II begins in earnest the development of manipulative skills essential to the trade. It re-introduces and elaborates on many of the tools, materials and equipment set forth in Phase I, and introduces projects and assignments designed to build trade knowledge and trade manipulative skills.

The project consists of three major components:

1) INSTRUCTOR'S GUIDE, containing a brief summary of each of the trade modules, including the materials, tools and equipment necessary to complete the Job Sheets and/or Assignments; an annotated bibliography for further study and/or clarification of a topic.

2) Self-paced LEARNING MODULES for student study. The modules are designed to impart trade knowledge and skills to the student. Each module is comprised of the following:
   a) Cover Sheet--lists module title, goals, performance indicators
   b) Study Guide--gives directions for completion of module
   c) Introduction (optional)--explains why the module is important
   d) Vocabulary--lists and defines any new trade terms or technical words necessary for understanding the module's content
   e) Supplementary References--details where to go for further study
   f) Information--provides information and graphics covering the module's topic(s)
   g) Self Assessment (optional)--provides students an opportunity to test their comprehension
   h) Assignment (optional)--enables students to research further into the topic
   i) Job Sheet (optional)--lists materials and tools necessary to complete the tasks which are designed to develop manipulative skill
   j) Post Assessment (optional)--enables the instructor to test student comprehension

3) SURVIVAL or COPING SKILLS MODULES have been developed to promote

social skills development. These 43 modules elaborate on the topics introduced in Phase I and cover such topics as: Losing your Driver's License, Death in the Family, Divorce, Time Management, Buying a Home, Maintaining Credit, and other social skills which have a bearing on the quality of work life and personal satisfaction.

## IMPLEMENTATION

It is essential during Phase II that the student develop the skills necessary to perform the tasks of the trade as outlined and demonstrated in the modules. For this reason, the instruction should be conducted by a skilled craftsperson from the trade or occupation who has the necessary teaching skills.

At the completion of Phase II, the trainee will have enough experience with the occupation to decide whether to continue with the training into Phase III, which will ultimately represent a career choice and entrance into apprenticeship.

### Recommendations for successful module completion

This phase of pre-apprenticeship study requires the student to develop job skills which will enable him or her to be a productive worker or to decide against pursuing the trade as a viable career choice. To that end, the instructor should:

1) Realize that skill-building and development is dependent on repeated physical performance and self-confidence.

2) Provide a setting in which students are encouraged to develop skills at their own individual pace. Assessments are designed as tests of comprehension, not as tests of skills or trade abilities.

3) Coordinate the use of materials, tools and equipment so that each student can fulfill his or her potential.

4) Ensure that each student practices the trade skills in the accepted manner, and practices enough to develop skills to a professional trade standard.

5) Make arrangements for visitations (to stores, shops, jobsites, etc.) and ensure that students participate fully.

6) Grade or comment on individual Assignments and Assessments, to ensure students are aware of their progress.

7) Ensure that the trade skills and knowledge presented in one module are fully understood by the student before allowing him or her to continue to subsequent modules.

## SCOPE

Trades developed for study in Phase II include:

| | |
|---|---|
| Drywall | Bricklaying |
| Painting | Parts Counter |
| Plumbing | *Electrical |
| Floor Laying | *Welding |
| Plastering | *Auto Mechanic |
| Cement Finishing | *Carpentry |
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* Adapted from previously developed ILS material.

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**MODULE TITLE:** Common Plastering Systems

**NUMBER IN SERIES:** 1st of 20

**NEW VOCABULARY WORDS:** 21

**GOAL:** Identifying various plastering systems and explaining the common uses of them.

**PERFORMANCE INDICATORS:** The student will successully complete a Self Assessment, an Assignment and a Post Assessment.

**OVERVIEW AND SUGGESTIONS:** This module provides basic information on gypsum, veneer and stucco systems and on bases to which these systems may be applied. A summary chart lists where each type is used, limitation, advantages, etc. Since this module introduces so many new vocabulary words, it is suggested that extra time be devoted to the study of these words. One way to do this is to have the student print definitions and words on separate sets of 3 X 5 cards. Then these cards can be matched up to practice the vocabulary.

**ASSIGNMENT(S) DESCRIPTION AND MATERIALS REQUIRED:**

The student is asked to use the Plaster Systems Chart in the module to answer questions.

Materials: None

**JOB SHEET DESCRIPTION AND MATERIALS AND TOOLS REQUIRED:**

None.

**SUPPLEMENTARY REFERENCES:**

Plastering Skill and Practice. F. Branden. 1971. pp. 117-32.

"Exterior Insulation: The Real Energy Saver." Walls and Ceilings. D. L. Cota. November 1977. pp. 15-17.

**MODULE TITLE:** Basic Lathing Materials and Techniques

**NUMBER IN SERIES:** 2nd of 20

**NEW VOCABULARY WORDS:** 2

**GOAL:** Explaining basic lathing techniques and executing them.

**PERFORMANCE INDICATORS:** The student will successfully complete a Self Assessment, a Job Sheet and a Post Assessment.

**OVERVIEW AND SUGGESTIONS:** This module provides information on the installation of board and metal lath, on the use of furring and some common lathing tools.

To make this a better learning experience, students should have the opportunity to visit a job site where lathing work is being done.

**ASSIGNMENT(S) DESCRIPTION AND MATERIALS REQUIRED:**

None.

**JOB SHEET DESCRIPTION AND MATERIALS AND TOOLS REQUIRED:**

Students are asked to install metal and board lath for walls and board lath for a ceiling. Requires:

Metal and board lath, materials and equipment necessary to install at least 15 feet of metal and 12 feet of board lath.

**SUPPLEMENTARY REFERENCES:**

Drywall Taping Workbook. California State Department of Education. 1972. pp. 83-87.

Incentive Apprenticeship Training for Plasterers. "Unit 4: Materials II and Bases." National Association of Home Builders. pp. 24-33.

**MODULE TITLE:** Preparing Common Surfaces for Plastering

**NUMBER IN SERIES:** 3rd of 20

**NEW VOCABULARY WORDS:** 0

**GOAL:** Understanding the tasks of preparing surfaces and executing these tasks.

**PERFORMANCE INDICATORS:** The student will successfully complete a Self Assessment, a Job Sheet and a Post Assessment.

**OVERVIEW AND SUGGESTIONS:** This module presents information on preparing concrete, masonry (different types of suction bases), board lath, veneer bases, and the steps involved in taping board lath. If possible, students should visit a construction site where they can observe the preparation of concrete surfaces.

**ASSIGNMENT(S) DESCRIPTION AND MATERIALS REQUIRED:**

None.

**JOB SHEET DESCRIPTION AND MATERIALS AND TOOLS REQUIRED:**

Students are asked to prepare concrete and board lath surfaces for plastering.

Requires:

- concrete slab
- scarring tool
- liquid bonding agent
- board lath for taping
- tape
- taping cement

**SUPPLEMENTARY REFERENCES:**

Incentive Apprenticeship Training for Plasterers. "Unit 4: Materials II and Bases." "Unit 12: Drywall and Veneer Base, Hanging and Finishing." National Association of Home Builders. 1979. pp. 29-33. pp. 1-15.

Drywall Taping Workbook. California State Department of Education. 1972. pp. 103-122.

**MODULE TITLE:** Aggregates and Admixtures

**NUMBER IN SERIES:** 4th of 20

**NEW VOCABULARY WORDS:** 4

**GOAL:** Identifying and explaining the use of plaster additives, including when and why they are used.

**PERFORMANCE INDICATORS:** The student will successfully complete a Self Assessment, an Assignment and a Post Assessment.

**OVERVIEW AND SUGGESTIONS:** This module discusses the difference between an aggregate and an admixture and classifies and discusses seven groups of admixtures: accelerators, retarders, strengtheners, plasticisers, water repellers, air entrainers, colors. One thing to be stressed in any discussion of this module is that great care must be used when adding anything to a plaster material. Too much salt can spoil a food, and too much of anything can spoil a plaster mix.

**ASSIGNMENT(S) DESCRIPTION AND MATERIALS REQUIRED:**

The student is asked to research the basic admixtures by visiting a supplier of plastering materials. A form is provided for the student to summarize the results of that visit.

Materials: None.

**JOB SHEET DESCRIPTION AND MATERIALS AND TOOLS REQUIRED:**

None.

**SUPPLEMENTARY REFERENCES:**

Incentive Apprenticeship Training for Plasterers. "Unit 7: Materials." National Association of Homebuilders. 1979. pp. 1-7.

Plastering Skills and Practice. F. Van Den Branden. 1971. pp. 117-32, 297-304.

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**MODULE TITLE:** Materials and Mixing of Gypsum Base Coats

**NUMBER IN SERIES:** 5th of 20

**NEW VOCABULARY WORDS:** 0

**GOAL:** Identifying the characteristics and use of materials used in common gypsum base coat plastering and demonstration of knowledge by hand and machine mixing to trade standard.

**PERFORMANCE INDICATORS:** The student will successfully complete a Self Assessment, a Job Sheet and a Post Assessment.

**OVERVIEW AND SUGGESTIONS:** This module discusses various types of ways to mix a gypsum base coat, including the use of lightweight aggregates and wood fiber. A summary chart for gypsum and stucco base coats with the following categories is included: SURFACE, SURFACE PREPARATION, TECHNIQUES, COMMENTS. The mixing of plaster materials by hand and by machine is also discussed in this module. The learning components in this module could be enhanced by arranging a field trip to a job site (or several job sites) where students could observe the mixing and use of plaster materials.

**ASSIGNMENT(S) DESCRIPTION AND MATERIALS REQUIRED:**

None.

**JOB SHEET DESCRIPTION AND MATERIALS AND TOOLS REQUIRED:**

The student is asked to first explain mixing procedures and then to mix materials using three different methods: Mixing machine, box mixing, using a paddle mixer. Requires:

plaster materials
clean water
mixing box and hoe
mixing machine
paddle mixer
buckets or pails

**SUPPLEMENTARY REFERENCES:**

Plastering Skill and Practice. F. Van Den Branden. 1971. pp. 117-132.

Incentive Apprenticeship Training for Plasterers. "Unit 5: Applying the Base Coat." National Association of Home Builders. 1979. pp. 1-28.

**MODULE TITLE:** Common Gypsum Finish Coats

**NUMBER IN SERIES:** 6th of 20

**NEW VOCABULARY WORDS:** 0

**GOAL:** Identifying the characteristics and use of materials used in common gypsum base coat plastering and demonstration of knowledge by mixing materials to trade standard.

**PERFORMANCE INDICATORS:** The student will successfully complete a Self Assessment, a Job Sheet and a Post Assessment.

**OVERVIEW AND SUGGESTIONS:** This module discusses 6 common finishes: Gypsum-lime putty trowel finish, Keenes cement-lime putty trowel finish, prepared gypsum trowel finish, Keenes cement-lime-sand float finish, gypsum-sand float finish, acoustical plaster finish. The method of ring mixing is also discussed in this module. If possible, students should have an opportunity to observe the mixing and application procedures for acoustical plaster and any other finish materials.

**ASSIGNMENT(S) DESCRIPTION AND MATERIALS REQUIRED:**

None.

**JOB SHEET DESCRIPTION AND MATERIALS AND TOCLS REQUIRED:**

Students are asked to prepare hydrated lime and to use the mechanical and ring mixing methods of preparing plaster materials. Required:

hydrated lime
gauging plaster
Keenes cement
sand
mixing tools and equipment

**SUPPLEMENTARY REFERENCES:**

Plastering Skill and Practice. F. Van Den Branden. 1971. pp. 285-295.

Incentive Apprenticeship Training for Plasterers. "Unit 6: Applying the Finish Coat." National Association of Home Builders. 1979. pp. 1-6.

**MODULE TITLE:** Common Veneer Plasters

**NUMBER IN SERIES:** 7th of 20

**NEW VOCABULARY WORDS:** 0

**GOAL:** Identifying the characteristics and use of materials used in common veneer plastering and demonstration of knowledge by mixing materials to trade standard.

**PERFORMANCE INDICATORS:** The student will successfully complete a Self Assessment, a Job Sheet and a Post Assessment.

**OVERVIEW AND SUGGESTIONS:** This module discusses the special lath preparations needed for veneer systems, special mixing requirements, general rules for veneer work and the application of one- and two-coat systems. After the completion of this module, you may wish to have a discussion on differences between use of regular gypsum systems and veneer systems, focusing on the advantages/disadvantages of each.

**ASSIGNMENT(S) DESCRIPTION AND MATERIALS REQUIRED:**

None.

**JOB SHEET DESCRIPTION AND MATERIALS AND TOOLS REQUIRED:**

Students are asked to prepare several different batches of veneer systems materials. Some of the batches will be properly mixed, some will not be properly mixed. These batches are applied to board lath and then observed to see what happens to them. Required:

tools and equipment for mixing veneer plaster

1 and 2 coat veneer mixes

admixtures/aggregates (both those that are recommended for use with a veneer system and some that are not recommended for use)

**SUPPLEMENTARY REFERENCES:**

Gypsum Construction Handbook. United States Gypsum Company. 1978. pp. 72-74, 148-157.

Incentive Apprenticeship Training for Plasterers. "Unit 5: Applying the Base Coat." National Association of Home Builders. 1979. pp. 8-11.

**MODULE TITLE:** Common Stucco Plasters

**NUMBER IN SERIES:** 8th of 20

**NEW VOCABULARY WORDS:** 0

**GOAL:** Identifying the characteristics and use of materials used in common stucco plasters and demonstration of knowledge by mixing materials to trade standard.

**PERFORMANCE INDICATORS:** The student will successfully complete a Self Assessment, a Job Sheet and a Post Assessment.

**OVERVIEW AND SUGGESTIONS:** This module discusses the limitations of stucco mixes, the basic 1:3 stucco mix, conventional and monolithic methods of application, curing of stucco, scratch coat, brown coat, finish coat, using lightweight aggregates, marblecrete and the use of artificial binder agents. At the conclusion of this module, it would be good to review the differences between gypsum applications and uses and stucco work.

**ASSIGNMENT(S) DESCRIPTION AND MATERIALS REQUIRED:**

None.

**JOB SHEET DESCRIPTION AND MATERIALS AND TOOLS REQUIRED:**

Students are asked to experiment with different stucco mixes, to apply those mixes to prepared sheets of plywood and to observe the results. Requires:

Tools, equipment and materials needed to prepare at least 3 small batches of a 1:3 stucco mix, 3 sheets of plywood.

**SUPPLEMENTARY REFERENCES:**

Plastering Skill and Practice. F. Van Den Branden. 1971. pp. 142-147.

Incentive Apprenticeship Training for Plasterers. "Unit 4: Materials II and Bases." National Association of Home Builders. 1979. pp. 15-22.

**MODULE TITLE:** New Systems

**NUMBER IN SERIES:** 9th of 20

**NEW VOCABULARY WORDS:** 0

**GOAL:** Identifying the characteristics and use of materials used in new systems such as Dryvit, Compo-Settef or Cota and demonstration of knowledge by mixing materials to trade standard.

**PERFORMANCE INDICATORS:** The student will successfully complete a Self Assessment, a Job Sheet and a Post Assessment.

**OVERVIEW AND SUGGESTIONS:** This module discusses the insulating qualities of new systems materials, the use of foam plastic panels, using the new systems (general directions), the primer-adhesive, acrylic glass fiber plaster and retro-fitting (acceptable and nonacceptable surfaces). If possible, students should have an opportunity to view at least 2 different systems being installed. This would give them a broader-based background.

**ASSIGNMENT(S) DESCRIPTION AND MATERIALS REQUIRED:**

None.

**JOB SHEET DESCRIPTION AND MATERIALS AND TOOLS REQUIRED:**

The student is asked to install and finish a surface area using new systems materials. The specific materials/system is not specified. This is optional for the instructor. Requires:

Supplies, tools and materials to install and finish an insulation system.

**SUPPLEMENTARY REFERENCES:**

Thermal Wall Insulation and Finish Systems. Compo Industries, Inc. 1980. Entire booklet.

Exterior Insulation - Solid State Systems. Cota Industries. n.d. pp. 1-11.

Outsulation, Exterior Wall Insulation and Finish Systems. Dryvit Systems, Inc. 1981. pp. 9-11, 20-23.

**MODULE TITLE:** Loading the Hawk and Loading the Trowel

**NUMBER IN SERIES:** 10th of 20

**NEW VOCABULARY WORDS:** 0

**GOAL:** Demonstrating the correct techniques for putting material on a hawk and for taking material from a hawk.

**PERFORMANCE INDICATORS:** The student will successfully complete a Self Assessment, a Job Sheet and a Post Assessment.

**OVERVIEW AND SUGGESTIONS:** Loading the hawk and the trowel are described and demonstrated with illustrations.

This module is somewhat flexible in terms of when it is taught. It could come very soon, or be put off until later in the series.

**ASSIGNMENT(S) DESCRIPTION AND MATERIALS REQUIRED:**

None.

**JOB SHEET DESCRIPTION AND MATERIALS AND TOOLS REQUIRED:**

Student is to mix practice plaster as directed by the instructor and then to practice loading the hawk from the mortarboard and the trowel from the hawk.

NOTE: Before the student does the Job Sheet, you may want to have the student practice picking up small objects using the hawk and the trowel.

Requires:

sand and lime for practice plaster
hawk
trowel
mortarboard

**SUPPLEMENTARY REFERENCES:**

Plastering Skill and Practice. F. Branden. 1971. pp. 216-218.

Incentive Apprenticeship Training for Plasterers. "Unit 3: Hawk, Trowel and Stilts." National Association of Home Builders. 1979. pp. 1-2.

**MODULE TITLE:** Patching Cracks and Holes

**NUMBER IN SERIES:** 11th of 20

**NEW VOCABULARY WORDS:** 0

**GOAL:** Identifying the steps in patching simple cracks and holes and executing those steps to trade standard.

**PERFORMANCE INDICATORS:** The student will successfully complete a Self Assessment, a Job Sheet and a Post Assessment.

**OVERVIEW AND SUGGESTIONS:** This module discusses the techniques for patching different sizes of cracks, exposed aggregate repairs, stucco, repairing holes in different lath materials, and descriptions of some cracks and their causes. The topic of vandalism may be brought into any discussion of this module. As an extra project, students could be encouraged to volunteer time (and companies might volunteer materials) for repair of vandalized plastered surfaces.

**ASSIGNMENT(S) DESCRIPTION AND MATERIALS REQUIRED:**

None.

**JOB SHEET DESCRIPTION AND MATERIALS AND TOOLS REQUIRED:**

The student is asked to first describe how a repair will be made, and then to make the repair. Requires:

Equipment and supplies necessary to make repairs as directed by the instructor.

**SUPPLEMENTARY REFERENCES:**

Gypsum Construction Handbook. United States Gypsum Co. 1978. pp. 365-367.

Incentive Apprenticeship Training for Plasterers. "Unit 8: Repairs." National Association of Home Builders. 1979. pp. 3-6.

**MODULE TITLE:** Setting Dots and Screeds

**NUMBER IN SERIES:** 12th of 20

**NEW VOCABULARY WORDS:** 4

**GOAL:** Explaining and using dots and screeds to make a surface plumb and the proper thickness throughout.

**PERFORMANCE INDICATORS:** The student will successfully complete a Self Assessment, a Job Sheet and a Post Assessment.

**OVERVIEW AND SUGGESTIONS:** This module discusses setting dots and using [illegible] establish screeds. Using a water gauge for the ceiling is also discussed. Students should have the opportunity to observe professional plasterers using these processes.

**ASSIGNMENT(S) DESCRIPTION AND MATERIALS REQUIRED:**

None.

**JOB SHEET DESCRIPTION AND MATERIALS AND TOOLS REQUIRED:**

On a wall designated by the instructor, the student is asked to set dots and make the screeds. They should repeat until the job can be done quickly, efficiently and accurately.

**SUPPLEMENTARY REFERENCES:**

Incentive Apprenticeship Training for Plasterers. "Unit 9: Basic Layout." National Association of Home Builders. 1979. pp. 8-11.

Gypsum Construction Handbook. United States Gypsum Company. 1978. pp. 249-50, 286-87.

**MODULE TITLE:** Using the Scratcher Tool

**NUMBER IN SERIES:** 13th of 20

**NEW VOCABULARY WORDS:** 0

**GOAL:** Identifying the steps for and executing the correct use of a scratcher.

**PERFORMANCE INDICATORS:** The student will successfully complete a Self Assessment, a Job Sheet and a Post Assessment.

**OVERVIEW AND SUGGESTIONS:** This module discusses the reasons for scratching a surface, describes and demonstrates with illustrations the use of the scratcher.

Have the students repeat the Job Sheet until they become proficient. This will mean having to clean the plastering surfaces and starting over again several times.

**ASSIGNMENT(S) DESCRIPTION AND MATERIALS REQUIRED:**

None.

**JOB SHEET DESCRIPTION AND MATERIALS AND TOOLS REQUIRED:**

The student is to mix a gypsum base coat plaster, apply it to one of several different surfaces, and then scratch the coat of plaster. Students should repeat until they are proficient on all of the different surface areas described in the Job Sheet.

**SUPPLEMENTARY REFERENCES:**

Plastering Skill and Practice. F. Van Den Branden. 1971. pp. 258-271.

Incentive Apprenticeship Training for Plasterers. "Unit 5: Applying the Base Coat." National Association of Home Builders. 1979. pp. 1-11.

**MODULE TITLE:** Applying and Spreading Plaster

**NUMBER IN SERIES:** 14th of 20

**NEW VOCABULARY WORDS:** 0

**GOAL:** Demonstrating the correct techniques for applying and spreading plaster with a hawk and a trowel.

**PERFORMANCE INDICATORS:** The student will successfully complete a Self Assessment, a Job Sheet and a Post Assessment.

**OVERVIEW AND SUGGESTIONS:** Applying and spreading plaster with a hawk and trowel are described and demonstrated with illustrations in this module. This module should be taught after the module on loading the hawk and trowel. The use of non-hardening practice plaster is recommended for this module. Students should scrape it off after a practice session. The surface can then be prepared for another practice session.

**ASSIGNMENT(S) DESCRIPTION AND MATERIALS REQUIRED:**

None.

**JOB SHEET DESCRIPTION AND MATERIALS AND TOOLS REQUIRED:**

Students are asked to first describe what they will do, and then to spread plaster on a surface designated by the instructor. The use of practice plaster is suggested. Requires:

sand and lime for practice plaster
hawk
trowel
mortarboard
a surface designated by the instructor

**SUPPLEMENTARY REFERENCES:**

Plastering Skill and Practice. F. Van Den Branden. 1971. Chapter 6.

Incentive Apprenticeship Training for Plasterers. "Unit 6: Applying the Finish Coat. National Association of Home Builders. 1979. pp. 10-19.

**MODULE TITLE:** Rodding and Darbying

**NUMBER IN SERIES:** 15th of 20

**NEW VOCABULARY WORDS:** 2

**GOAL:** Identifying the steps for and execute the use of a rod and a darby.

**PERFORMANCE INDICATORS:** The student will successfully complete a Self Assessment, a Job Sheet and a Post Assessment.

**OVERVIEW AND SUGGESTIONS:** This module describes and demonstrates with illustrations the use of the rod and the darby.

**ASSIGNMENT(S) DESCRIPTION AND MATERIALS REQUIRED:**

None.

**JOB SHEET DESCRIPTION AND MATERIALS AND TOOLS REQUIRED:**

The student is asked to describe how the wall surface will be rodded and darbied, to apply a base and a brown coat, to rod and darby as needed to bring to a level surface. Requires:

Tools and materials needed to put a brown coat of gypsum plaster on a wall and to rod and darby that surface.

**SUPPLEMENTARY REFERENCES:**

Incentive Apprenticeship Training for Plasterers. "Unit 5: Applying the Base Coat." National Association of Home Builders. 1979. pp. 23-25.

Plastering Skill and Practice. F. Van Den Branden. 1971. pp. 215-32.

**MODULE TITLE:** Floating

**NUMBER IN SERIES:** 16th of 20

**NEW VOCABULARY WORDS:** 0

**GOAL:** Identifying various floats, explaining and demonstrating floating to a trade standard.

**PERFORMANCE INDICATORS:** The student will successfully complete a Self Assessment, a Job Sheet and a Post Assessment.

**OVERVIEW AND SUGGESTIONS:** Texturing, troweling and floating are compared as ways of working a finish coat in this module. The module discusses the physical effects on a plastered surface achieved by floating, the steps of floating, floating an angle, making a sand float finish, floating stucco, floating acoustic plaster and common float tools. Students should have the opportunity to visit a job site and observe professional plasterers applying a float finish to a surface.

**ASSIGNMENT(S) DESCRIPTION AND MATERIALS REQUIRED:**

None.

**JOB SHEET DESCRIPTION AND MATERIALS AND TOOLS REQUIRED:**

The student is asked to apply plaster and finish using the texturing, troweling and floating techniques. Then the student should compare and discuss the 3 different finishes and techniques. Requires:

plaster
plastering tools
3 sheets of gypsum lath

**SUPPLEMENTARY REFERENCES:**

Plastering Skill and Practice. F. Van Den Branden. 1971. pp. 285-299.

Incentive Apprenticeship Training for Plasterers. "Unit 6: Applying the Finish Coat." National Association of Home Builders. 1979. pp. 5-6, 14.

**MODULE TITLE:** Using Stilts

**NUMBER IN SERIES:** 17th of 20

**NEW VOCABULARY WORDS:** 1

**GOAL:** Practicing the application of plaster while on stilts.

**PERFORMANCE INDICATORS:** The student will successfully complete a Self Assessment, a Job Sheet and a Post Assessment.

**OVERVIEW AND SUGGESTIONS:** This module discusses the advantages and disadvantages (safety) of working on stilts, specific work procedures when using stilts, information about different kinds of stilts, and steps on how to learn to use stilts.

The exact placement of this module in the learning sequence is open to interpretation. Once it has been introduced, you may wish to use it in a "review capacity" by having students reread-redo the module to fill slack time that is too short to start a new project.

**ASSIGNMENT(S) DESCRIPTION AND MATERIALS REQUIRED:**

None.

**JOB SHEET DESCRIPTION AND MATERIALS AND TOOLS REQUIRED:**

Students are asked to describe what they will do and then to use stilts while applying plaster to the ceiling and/or wall surfaces.

**SUPPLEMENTARY REFERENCES:**

Incentive Apprenticeship Training for Plasterers. "Unit 3: Hawk and Trowel, Stilts." National Association of Home Builders. 1979. pp. 1-8.

**MODULE TITLE:** Spraying Equipment

**NUMBER IN SERIES:** 18th of 20

**NEW VOCABULARY WORDS:** 0

**GOAL:** Explaining and demonstrating the correct use of various guns and sprayers.

**PERFORMANCE INDICATORS:** The student will successfully complete a Self Assessment, a Job Sheet and a Post Assessment.

**OVERVIEW AND SUGGESTIONS:** This module discusses how to prime a mixing machine for gypsum and stucco materials, cleaning the mixing machine, special considerations for high-rise plastering, using the nozzle, the hose, applying scratch and brown coats and applying acoustical plaster. A list of common problems and solutions is also included. If possible, arrange to let the students use or observe different brands as well as different types of equipment.

**ASSIGNMENT(S) DESCRIPTION AND MATERIALS REQUIRED:**

None.

**JOB SHEET DESCRIPTION AND MATERIALS AND TOOLS REQUIRED:**

The student is asked to install two sections of metal lath. Sand aggregate scratch and brown coats are applied to one section and a scratch and brown coat using lightweight aggregate is applied to the other section of lath.

Requires:

mixing and spraying equipment
diamond mesh metal lath
tools and equipment necessary to install the lath
gypsum plaster
sand
perlite or vermiculite

**SUPPLEMENTARY REFERENCES:**

Plastering Skill and Practice. F. Van Den Branden. 1971. pp. 311-313.

Gypsum Construction Handbook. United States Gypsum Company. 1978. pp. 395-401.

**MODULE TITLE:** Ornamental Plastering Work

**NUMBER IN SERIES:** 19th of 20

**NEW VOCABULARY WORDS:** 0

**GOAL:** Identifying and explaining common ornamental plastering materials and techniques.

**PERFORMANCE INDICATORS:** The student will successfully complete a Self Assessment, an Assignment and a Post Assessment.

**OVERVIEW AND SUGGESTIONS:** This module discusses ornamental plastering in terms of being decorated. Texturing of plaster is included and discussed very briefly. Gypsum cement and molding plaster are compared, as are hand and machine mixing. Also discussed are templates, form molds, straight mold work and circular mold work. This module does not intend to teach a level of proficiency with ornamental work, but rather an awareness of what this type of plastering is and how it is done.

**ASSIGNMENT(S) DESCRIPTION AND MATERIALS REQUIRED:**

The student is asked to find at least 5 different examples of ornamental plastering and to describe how each was done.

Materials: None.

**JOB SHEET DESCRIPTION AND MATERIALS AND TOOLS REQUIRED:**

None.

**SUPPLEMENTARY REFERENCES:**

Gypsum Construction Handbook. United States Gypsum Company. 1978. pp. 297-302.

Incentive Apprenticeship Training for Plasterers. "Unit 10: Special Finishes." National Association of Home Builders. 1979. pp. 1-18.

**MODULE TITLE:** Templates Used in Plastering

**NUMBER IN SERIES:** 20th of 20

**NEW VOCABULARY WORDS:** 2

**GOAL:** Explaining the use of templates and making a simple template.

**PERFORMANCE INDICATORS:** The student will successfully complete a Self Assessment, a Job Sheet and a Post Assessment.

**OVERVIEW AND SUGGESTIONS:** This module discusses the making of templates and the construction of the supporting framework. Templates are differentiated into 2 types: Those that block out an area to be covered with plaster, and those that shape plaster. The student is given step-by-step guidelines for making a cornice. A good source for examples of ornamental work might be architectural magazines (especially older ones) and art history/history of architecture books. Some local historical societies may have photographs of older buildings showing ornamental work.

**ASSIGNMENT(S) DESCRIPTION AND MATERIALS REQUIRED:**

None.

**JOB SHEET DESCRIPTION AND MATERIALS AND TOOLS REQUIRED:**

The student is asked to draw and cut out a template and then to construct a sled for the template. The template is to be mounted on the sled.

As extra credit, the student could also construct a template sled for bench work and practice making a cornice on a bench. Requires:

metal sheets
cutting tools
layout dye
wood
fasteners
wood working tools

**SUPPLEMENTARY REFERENCES:**

Incentive Apprenticeship Training for Plasterers. "Unit 9: Basic Layout." 1979. pp. 20-23.

Plastering Skill and Practice. F. Van Den Branden. 1971. pp. 254-57, 451-60.

## BIBLIOGRAPHY


DRYWALL TAPING WORKBOOK
California State Department of Education
Sacramento, California
(1972)

Training manual for drywall installers.

EXTERIOR INSULATION - SOLID STATE SYSTEMS
Cota Industries
Des Moines, IA
(n.d.)

Book describing Cota Industries materials.

WALLS AND CEILINGS MAGAZINE
"Exterior Insulation: The Real Energy Saver."
D. L. Cota
(November, 1977)

The magazine is published monthly for the plastering trades.

## BIBLIOGRAPHY

GYPSUM CONSTRUCTION HANDBOOK
United States Gypsum Company
Chicago, IL
(1978)

Practical guide for persons working with gypsum materials. Not a training manual.

INCENTIVE APPRENTICESHIP TRAINING FOR PLASTERERS
National Association of Home Builders
Washington D.C.
(1979)

An extensive introductory training manual for apprentice plasterers. Has some learning activities that could be adapted for pre-apprenticeship instruction.

OUTSULATION, EXTERIOR WALL INSULATION AND FINISH SYSTEMS
Dryvit Systems, Inc.
Warwick, RI
(1981)

Book describing Dryvit Systems materials.

## BIBLIOGRAPHY


PLASTERING SKILL AND PRACTICE
F. Van Den Branden
T. L. Hartsell
American Technical Society
Chicago, IL
(1971)

A comprehensive guide to the basic and finer points of working with plaster materials.

THERMAL WALL INSULATION AND FINISH SYSTEMS
Compo Industries, Inc.
Waltham, MA
(1980)

Booklet describing Compo-Settef materials.

TROWEL TRADES TOOLS CATALOG
Goldblatt
Kansas City, KS
(Current Year)

Shows many of the tools and pieces of equipment used by a plasterer.